That which is claimed is:

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- 1. A process for selectively oxygenating a distillate feedstock which process comprises contacting said feedstock with an oxygen-containing gas in an oxidation zone at oxidation conditions in the presence of an oxidation catalyst comprising a Group VIII metal component and a basic support and recovering an effluent stream distillate having an oxygen content incorporated therein.
 - 2. The process of Claim 1 wherein the Group VIII metal is cobalt.
 - 3. The process of Claim 1 wherein the basic support comprises magnesium oxide.
 - 4. The process of Claim 1 wherein the basic support comprises calcium oxide.
- 5. The process of Claim 1 wherein the Group VIII metal is present in the oxidation catalyst in an amount ranging from about 0.1 wt. % to about 50 wt.% based on the total weight of the catalyst.
- 15 6. The process of Claim 2 where the basic support comprises magnesium oxide.
 - 7. The process of Claim 2 wherein the basic support comprises calcium oxide.
 - 8. The process of Claim 5 wherein the Group VIII metal is cobalt and the basic support comprises magnesium oxide.
 - 9. The process of Claim 1 wherein the effluent stream distillate TAN number is less than about 2 mg KOH/g.
 - 10. The process of Claim 1 wherein the Group VIII metal is present in the oxidation catalyst in an amount ranging from about 2 wt. % to about 20 wt.% based on the total weight of the catalyst.
 - 11. The process of Claim 1 wherein the Group VIII metal is present in and amount ranging from about 4 to about 12 wt. %.
 - 12. The process of Claim 10 wherein the Group VIII metal is cobalt.
 - 13. The process of Claim 11 wherein the Group VIII metal is cobalt.
 - 14. The process of Claim 12 wherein the basic support comprises magnesium oxide.
 - 15. The process of Claim 12 wherein the basic support comprises calcium oxide.

- 16. The process of Claim 13 wherein the basic support comprises magnesium oxide.
- 17. The process of Claim 13 wherein the basic support comprises calcium oxide.
- 5 18. The process of Claim 1 wherein the effluent stream distillate has an oxygen content of about .02 to about 20 wt. % and a TAN number of less than about 2 mg KOH/g.
 - 19. The process of Claim 18 wherein the Group VIII metal is cobalt.
- 20. The process of Claim 18 wherein the basic support comprises magnesium oxide.
 - 21. The process of Claim 18 wherein the basic support comprises calcium oxide.
 - 22. The process of Claim 18 wherein the Group VIII metal is present in the oxidation catalyst in an amount ranging from about 0.1 wt. % to about 50 wt.% based on the total weight of the catalyst.

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- 23. The process of Claim 19 where the basic support comprises magnesium oxide.
- 24. The process of Claim 19 wherein the basic support comprises calcium oxide.
- 25. The process of Claim 22 wherein the Group VIII metal is cobalt and the basic support comprises magnesium oxide.
 - 26. The process of Claim 18 wherein the Group VIII metal is present in the oxidation catalyst in an amount ranging from about 2 wt. % to about 20 wt.% based on the total weight of the catalyst.
 - 27. The process of Claim 18 wherein the Group VIII metal is present in and amount ranging from about 4 to about 12 wt. %.
 - 28. The process of Claim 26 wherein the Group VIII metal is cobalt.
 - 29. The process of Claim 27 wherein the Group VIII metal is cobalt.
 - 30. The process of Claim 28 wherein the basic support comprises magnesium oxide.
 - 31. The process of Claim 28 wherein the basic support comprises calcium oxide.

- 32. The process of Claim 29 wherein the basic support comprises magnesium oxide.
- 33. The process of Claim 29 wherein the basic support comprises calcium oxide.
- 34. A process for selectively oxygenating a distillate feedstock which process comprises contacting said feedstock with an oxygen-containing gas in an oxidation zone at oxidation conditions in the presence of an oxidation catalyst comprising cobalt in an amount ranging from 4 to 12 wt.% and magnesium oxide and receiving an effluent stream distillate having an oxygen content of about 1.8 wt.% to about 10 wt.% and a TAN number less than about 1 mg KOH/g.